



US Army Corps
of Engineers
Detroit District

USACE Presence in the Huron/Erie Corridor

Dr. Jim Selegean, P.E.
U.S. Army Corps of Engineers

Great Lakes Hydraulics and Hydrology Office
If it flows, we can model it!



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Federal Harbors/Channels





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Aerial Photography





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Detroit River Aerial Photography





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Detroit River Aerial Photography





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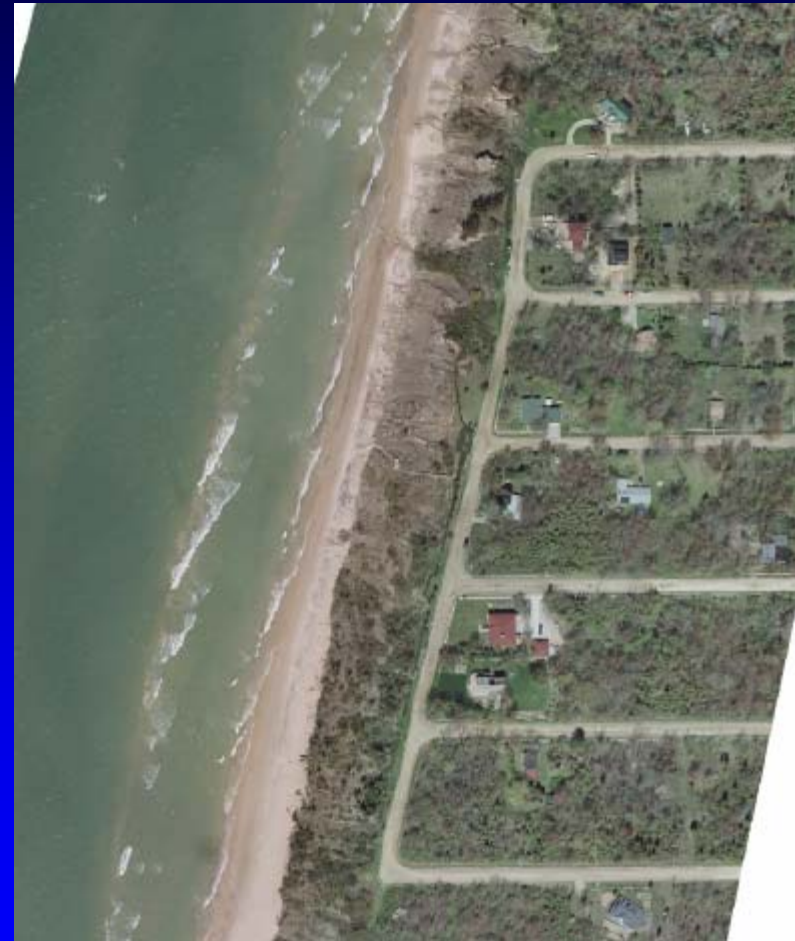
Detroit River Aerial Photography





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Project-Specific Aerial Photography and Topographic LIDAR



Draped Aerial Photography





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Oblique Aerial Photography and Video



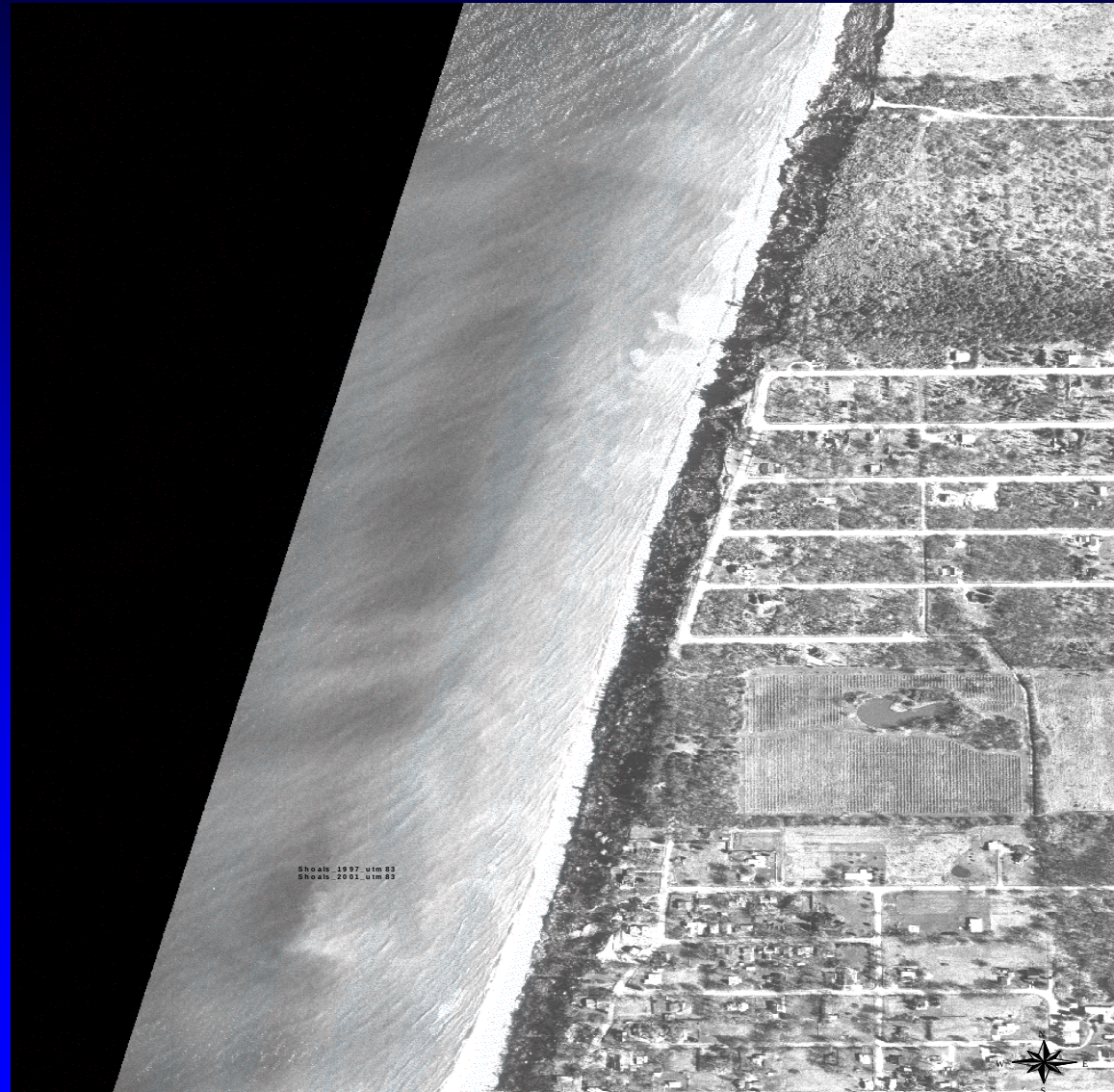


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Bathymetry

SHOALS

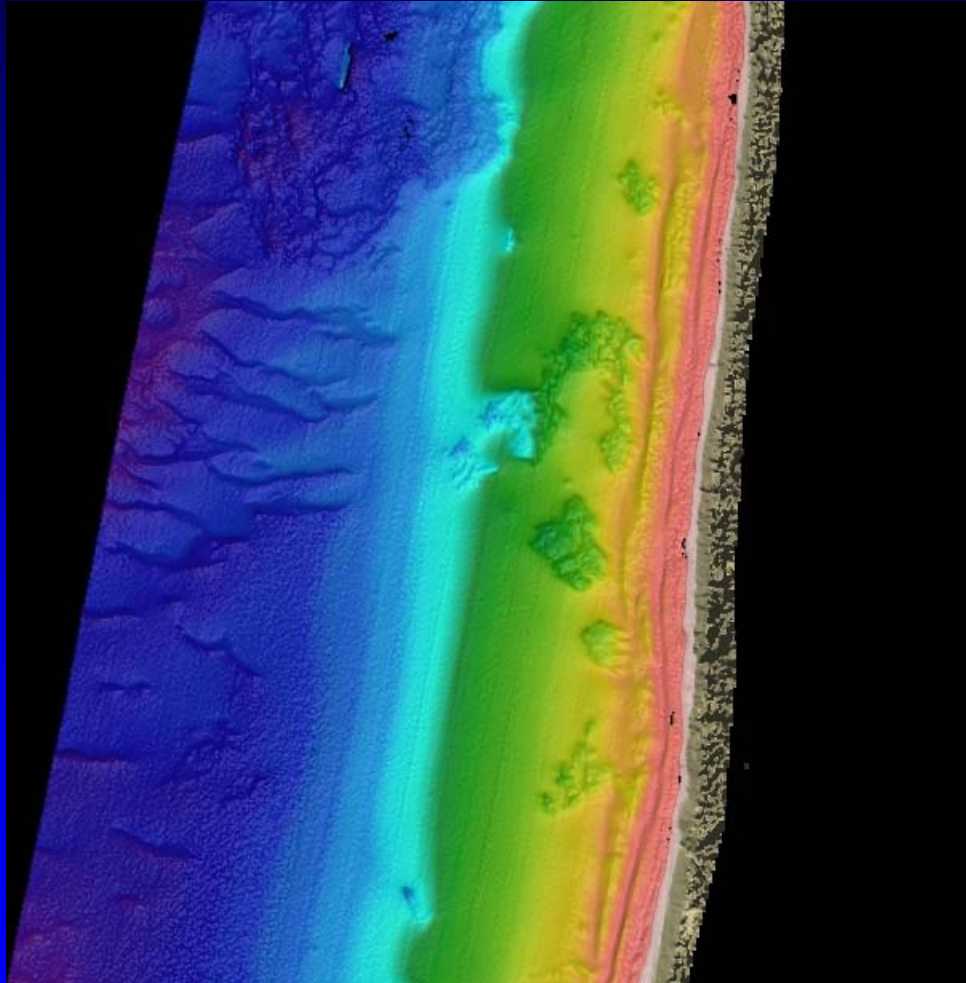
Blue 1997
Red 2001





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SHOALS





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Meteorological Data

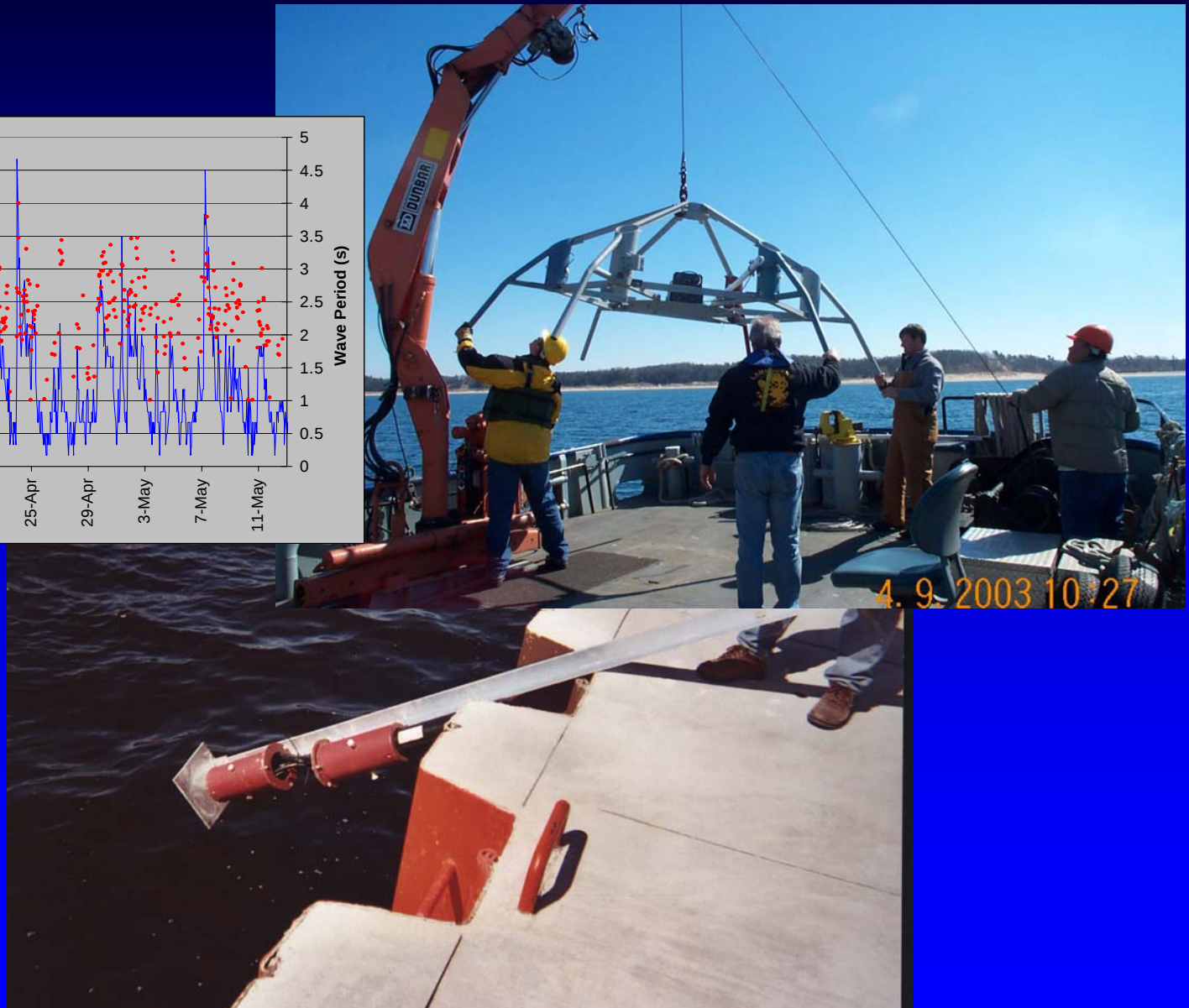
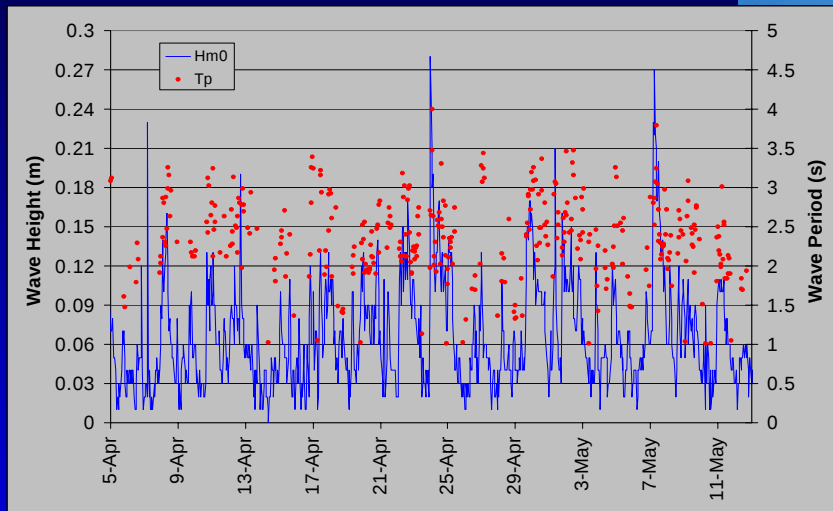
- Precipitation
- Wind Speed
- Wind Direction
- Air Temp
- Humidity





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Wave Gages





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Web Cams



USACE Engineer Research and Development Center
Cold Regions Research and Engineering Laboratory



Web Camera Images at ERDC/CRREL Allegan MI

Latest Information and Recent images from active cameras

Camera 1 at Allegan MI



Table of images from above camera or

Camera 2 at Allegan MI



Table of images from above camera or

<https://webcam.crrel.usace.army.mil/allegan/>

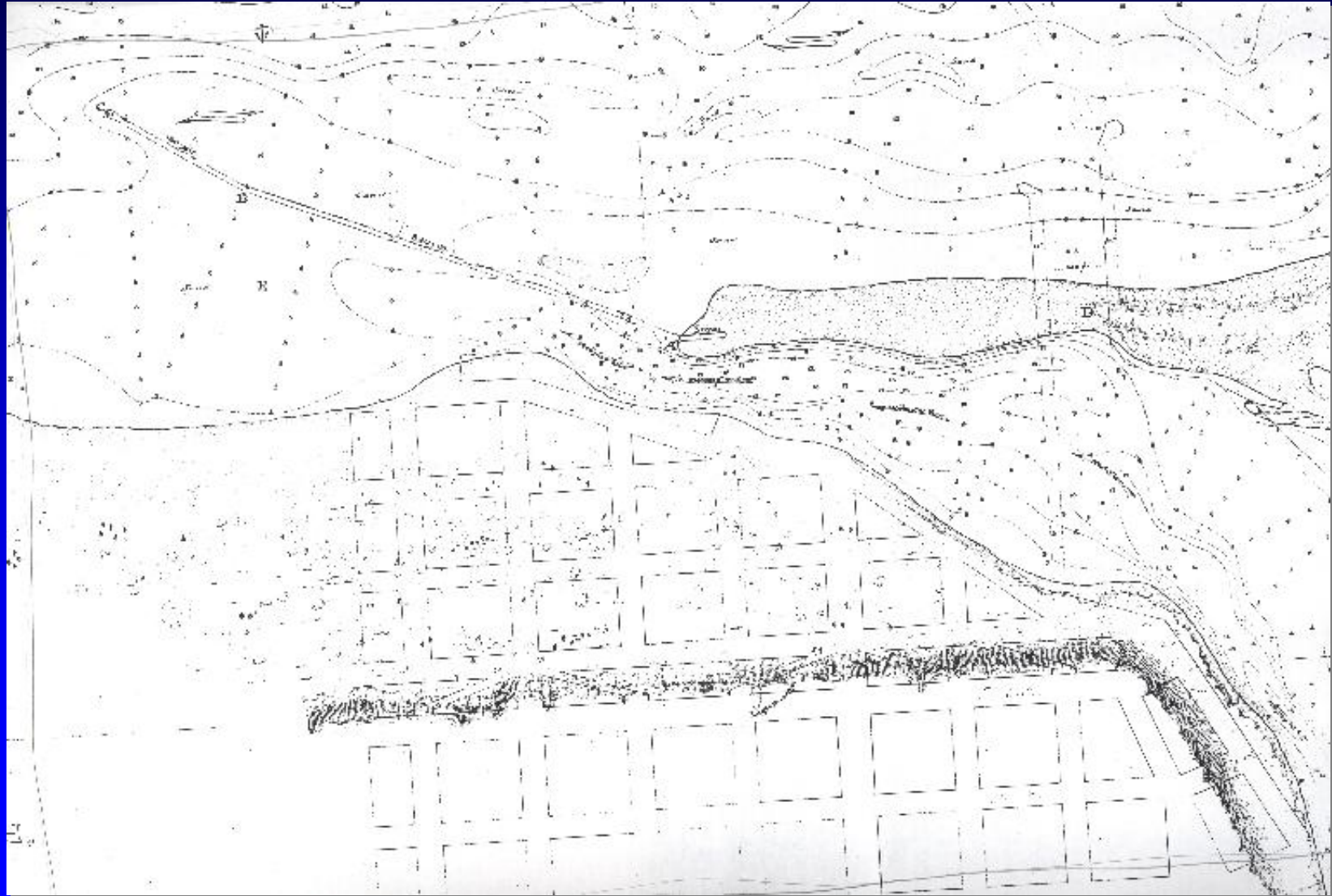


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Historic Mapping

1834

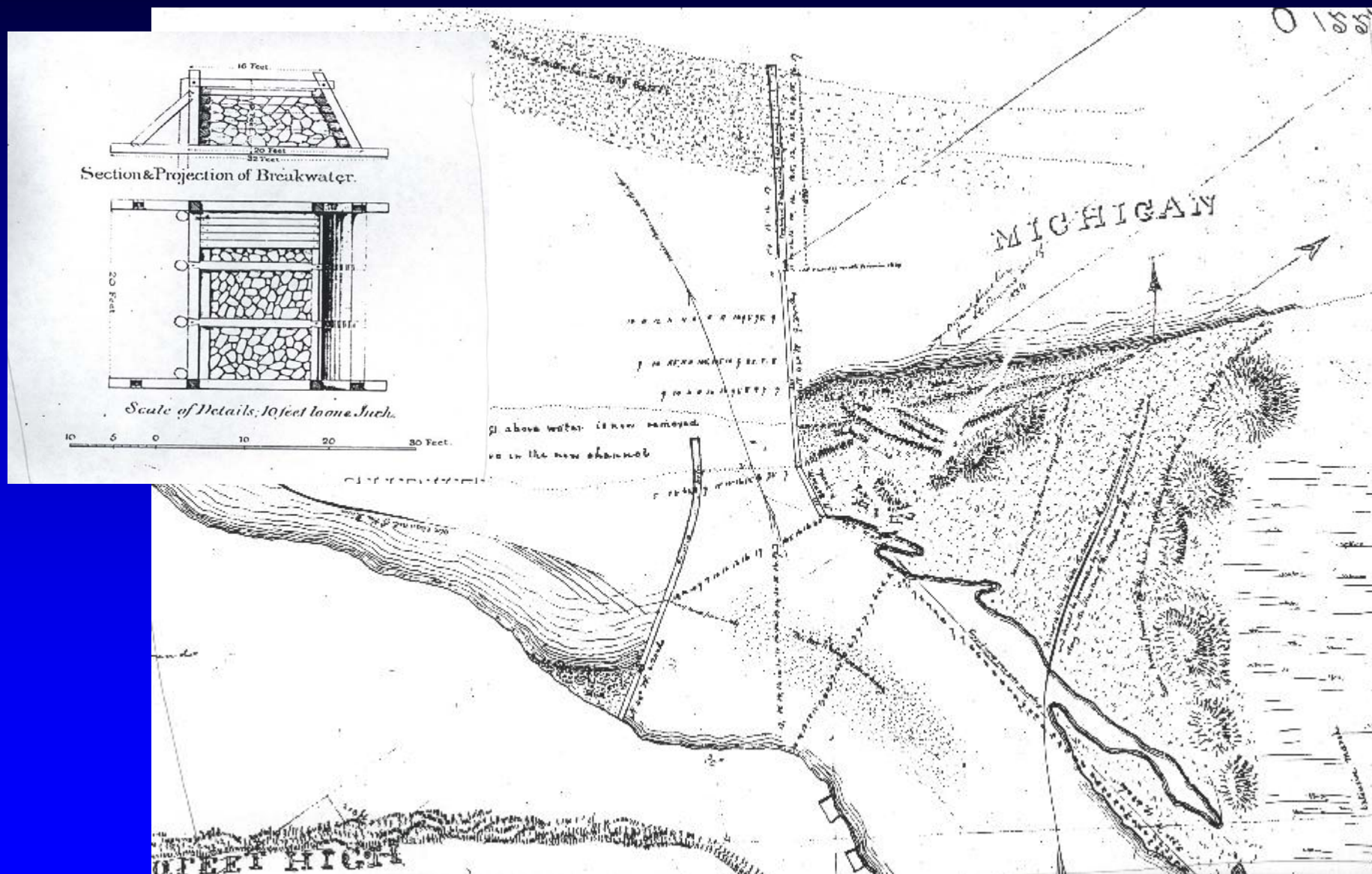




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Historic Mapping 1839



Historic Mapping

1844

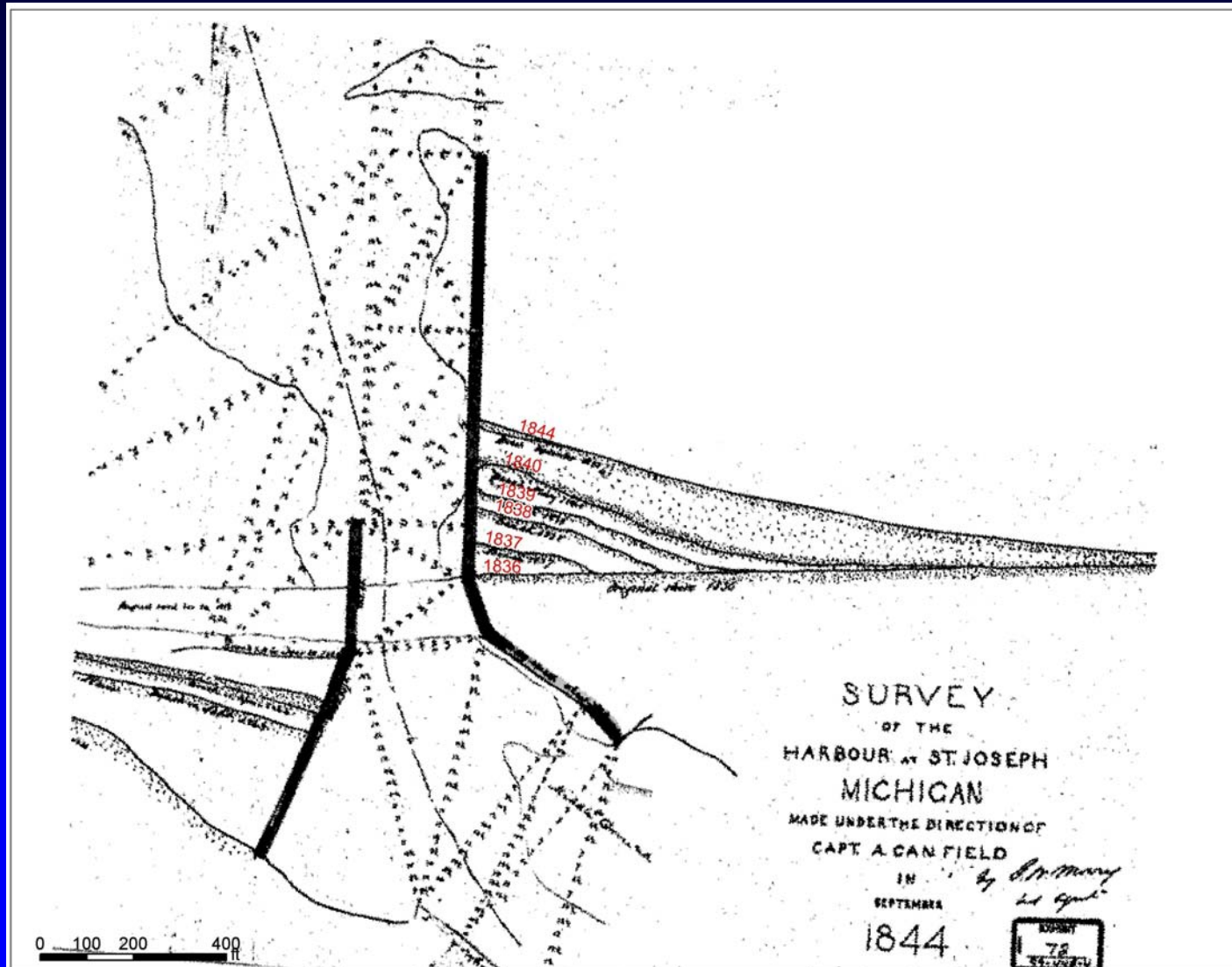


Figure 7(iii) Fillet beach changes from 1836 to 1844

Summary of Historic Mapping





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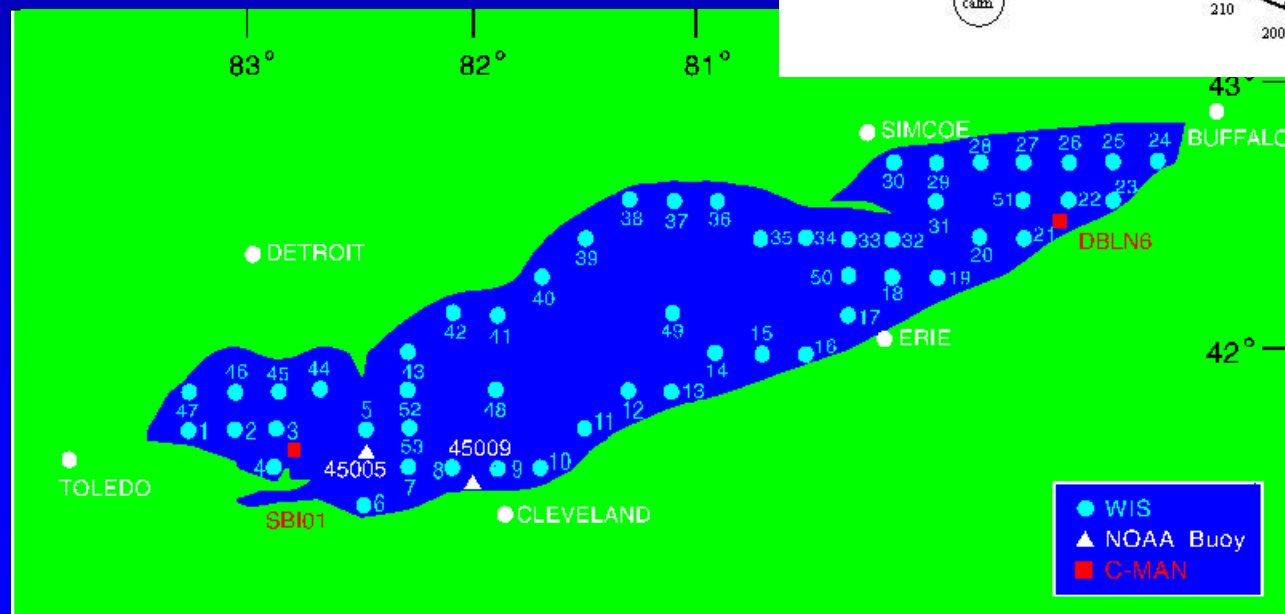
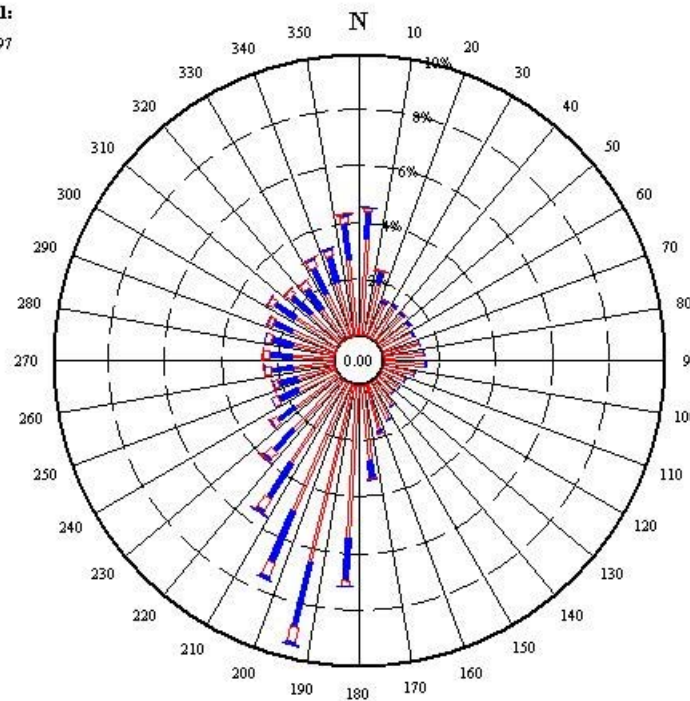
WIS Wave Data

Current Time Interval:
01 Jan, 1956 to 31 Dec, 1997

Season Selection:
All

Wave Height (m)

7.00 - 8.00
6.00 - 7.00
5.00 - 6.00
4.00 - 5.00
3.00 - 4.00
2.00 - 3.00
1.00 - 2.00
0 - 1.00





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Stratigraphy

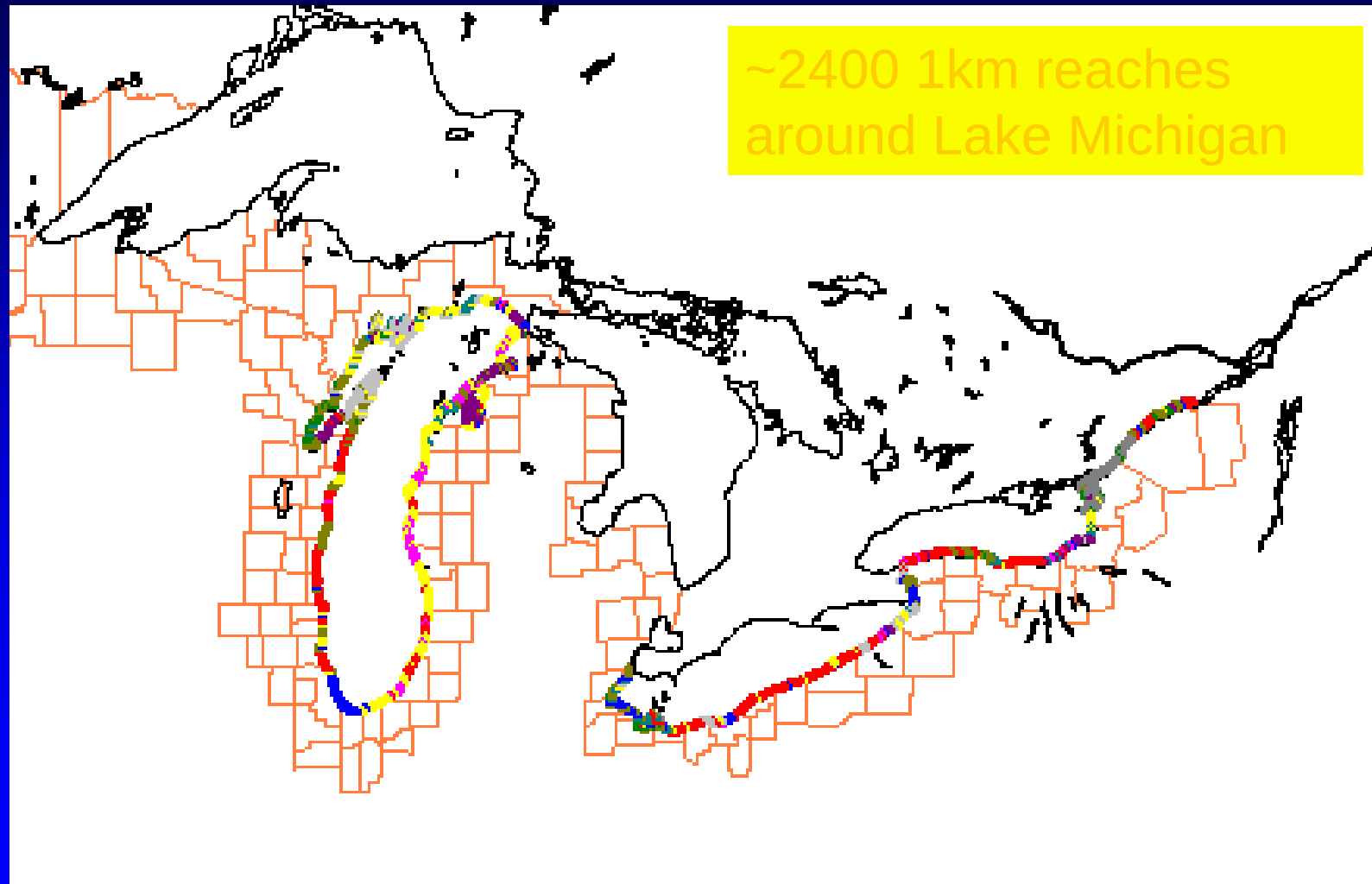




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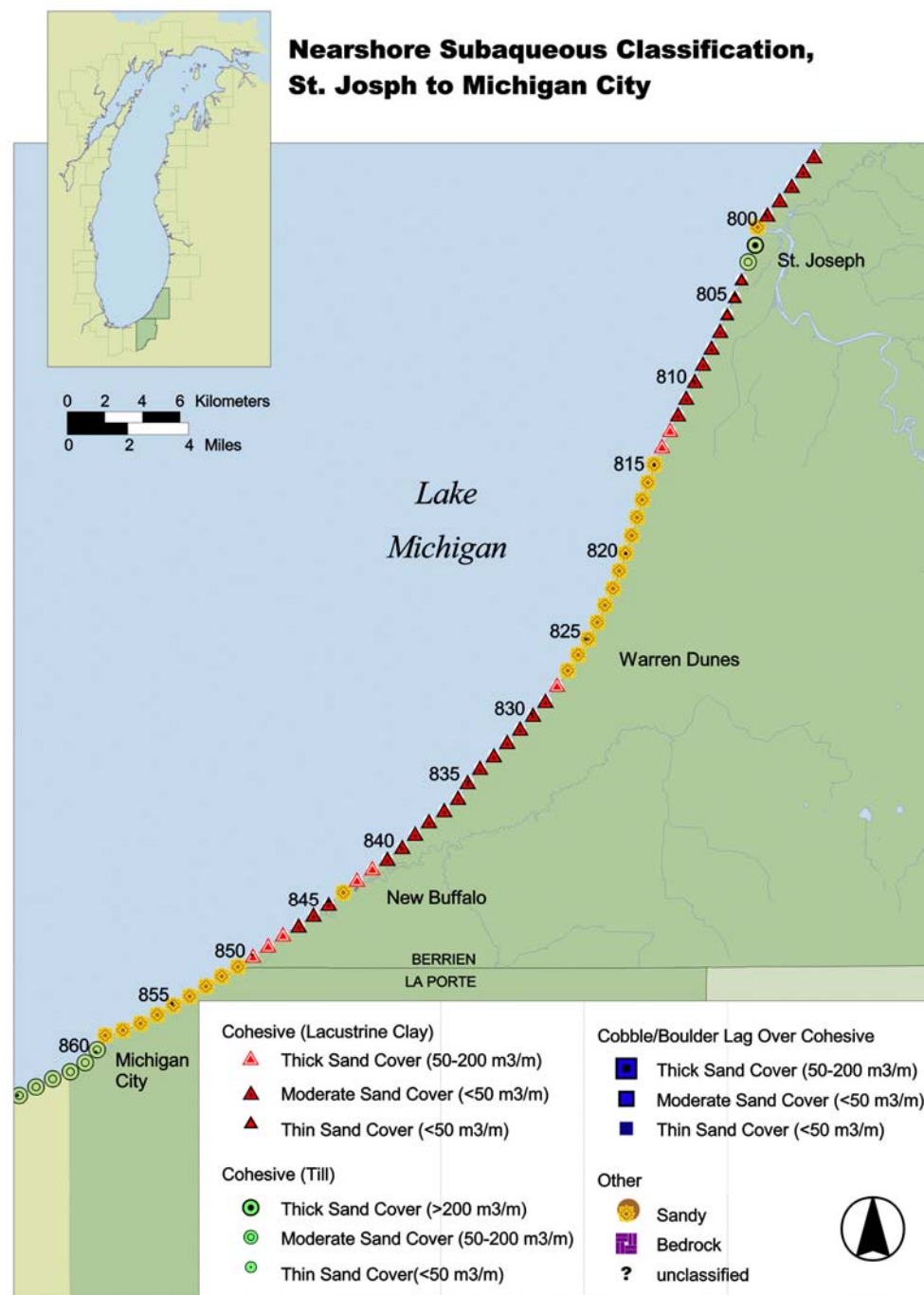
Coastal GIS Data Base





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3a - (Sand content 0-20%)
3b - (Sand content 20-50%)
3c - (Sand content >50%)

● **5 - Sand Beach/Dune**

 Bedrock

- 7 - Resistant
8 - Non-resistant

9 - Open Shoreline Wetlands

10 - Artificial

? 11 - Unclassified

5

Lake
Michigan

Warren Dunes

New Buffalo

BERRIEN
LA PORTE

ST JOSEPH



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Additional Data Sets in Coastal Database

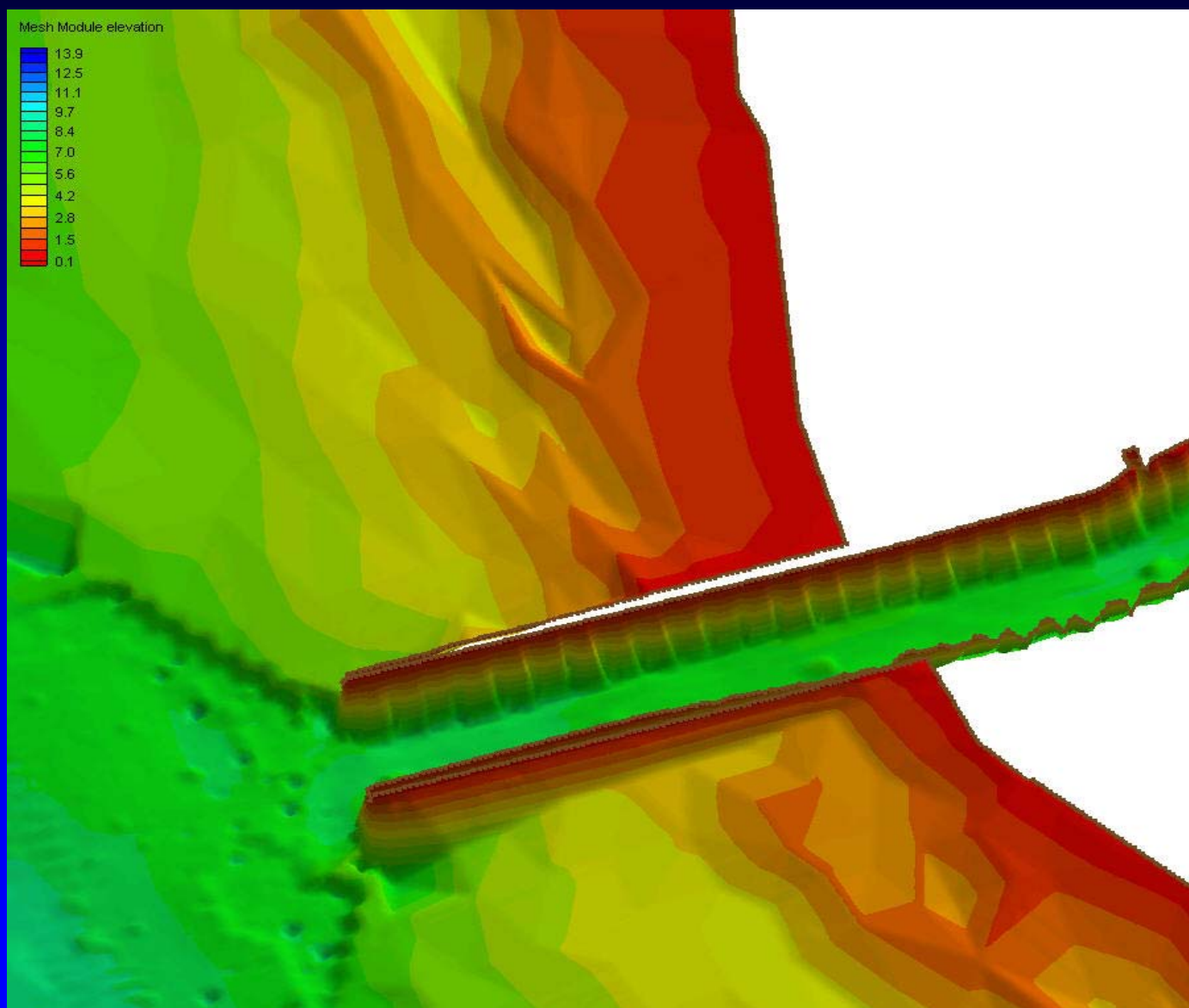
- Reach Number
- Latitude and Longitude of the Center Points of Each Reach
- Geologic Shore Type Classification
- Shore Protection Classification (including percent of reach protected)
- Nearshore Geology Classification
- Long-Term Recession Rate Data
- High Water Period Recession Rate Data
- Low Water Period Recession Rate Data
- Recession Rate Data Source
- Land Use Classifications
- Land Use Trend Estimates
- Bluff Height
- Bluff Slope Percent
- Number of Gullies
- Ownership Information



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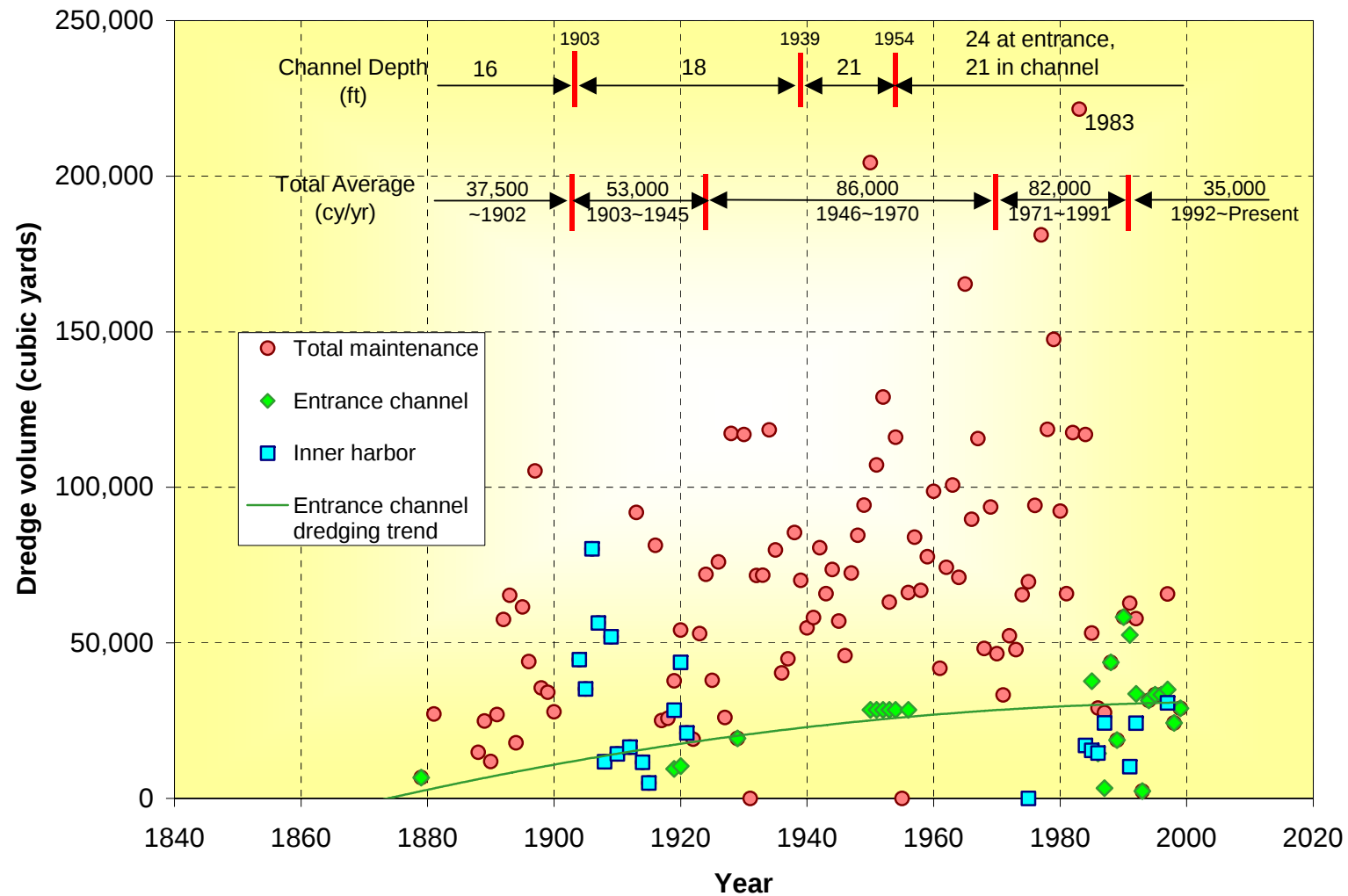
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Annual Bathymetric Survey of Federal Harbors



Historic Dredging Records

Figure 16.2 Dredging History at St. Joseph Harbor (from USACE Detroit District)





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Dredging Data

Page

Dredging Information

- Michigan
- Minnesota
- Wisconsin
- Clickable Map
- Dredging Report

Notice to Navigation Interest

- Michigan
- Minnesota
- Wisconsin
- Latest Notices

Schedules & Contractor
Listing

Microstation Survey

- Michigan
- Minnesota
- Wisconsin

Acrobat Surveys

- Michigan
- Minnesota
- Wisconsin

Project Pictures

- Michigan
- Minnesota
- Wisconsin

Project Maps

- Michigan





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St. Clair River Gages





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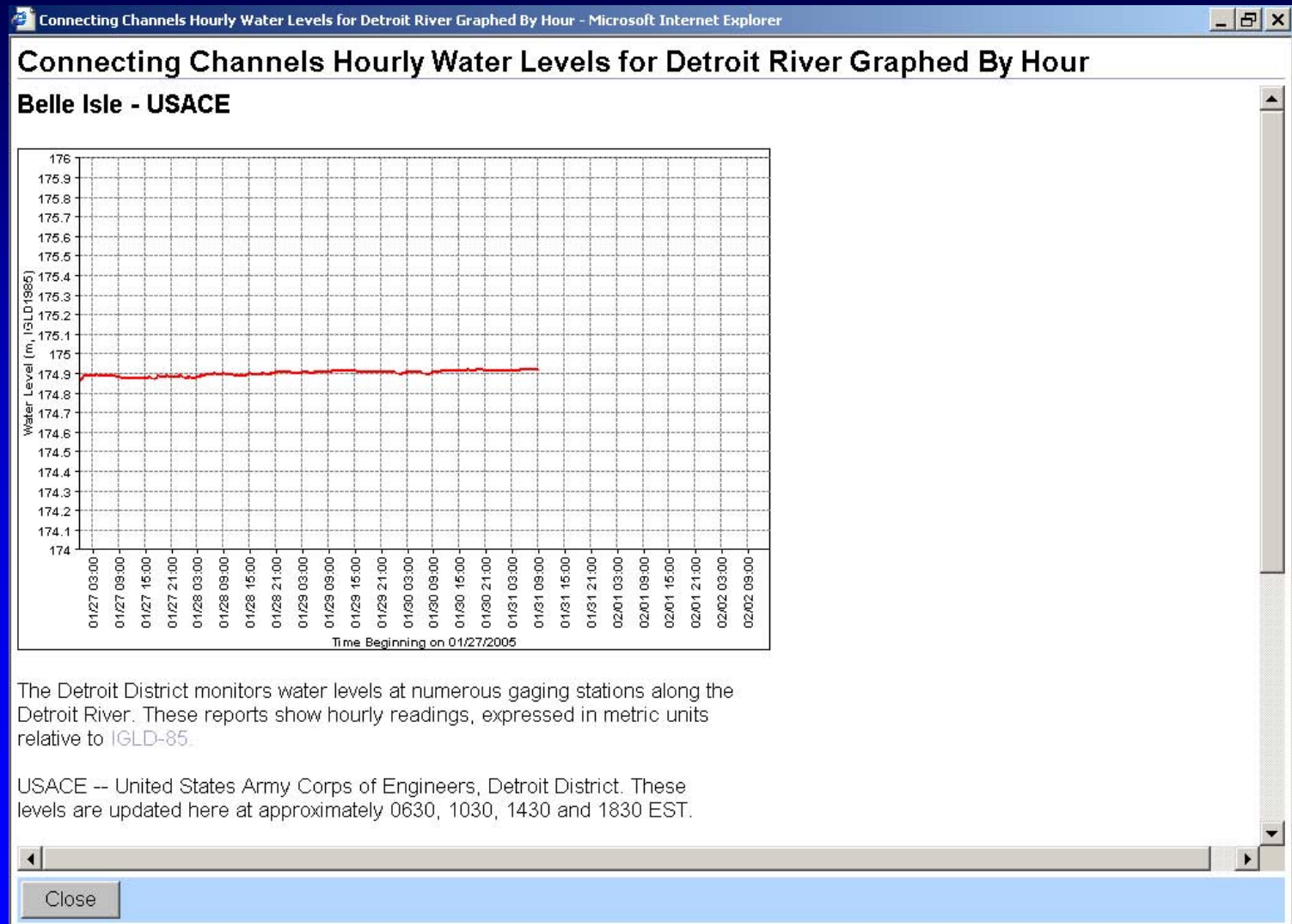
Detroit River Gages





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Detroit River Gages



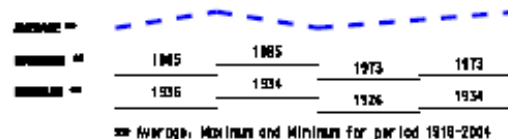
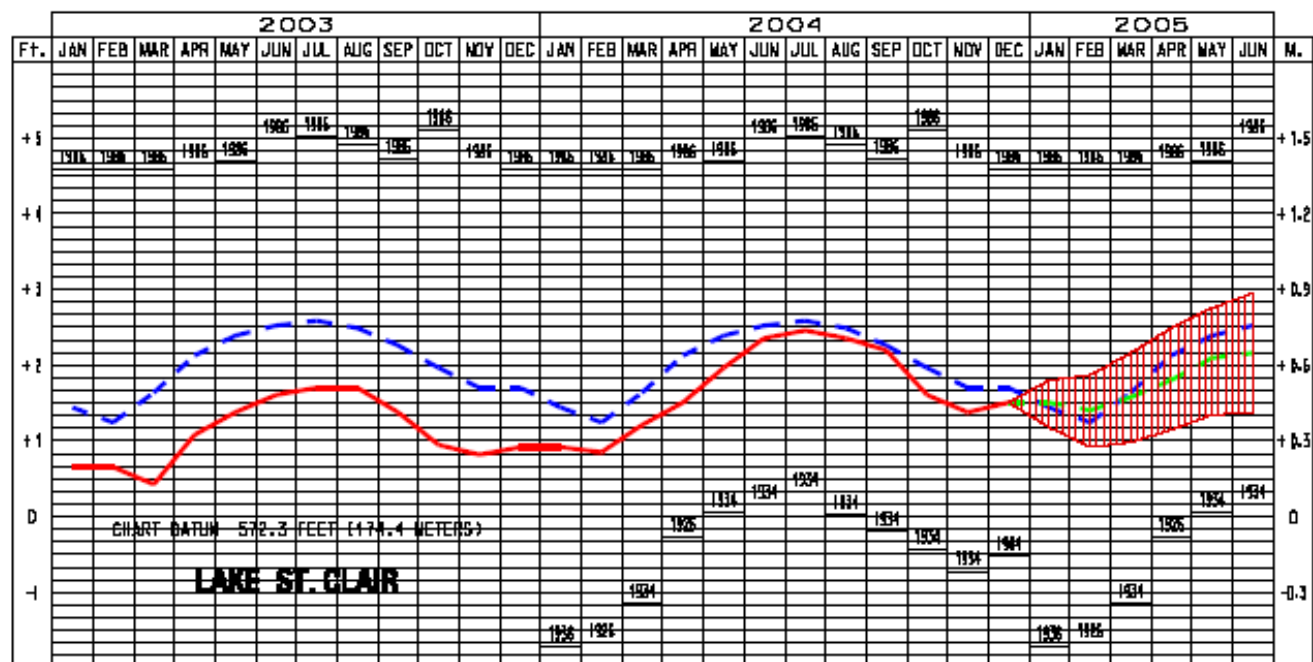


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6-Month Lake Level Forecast

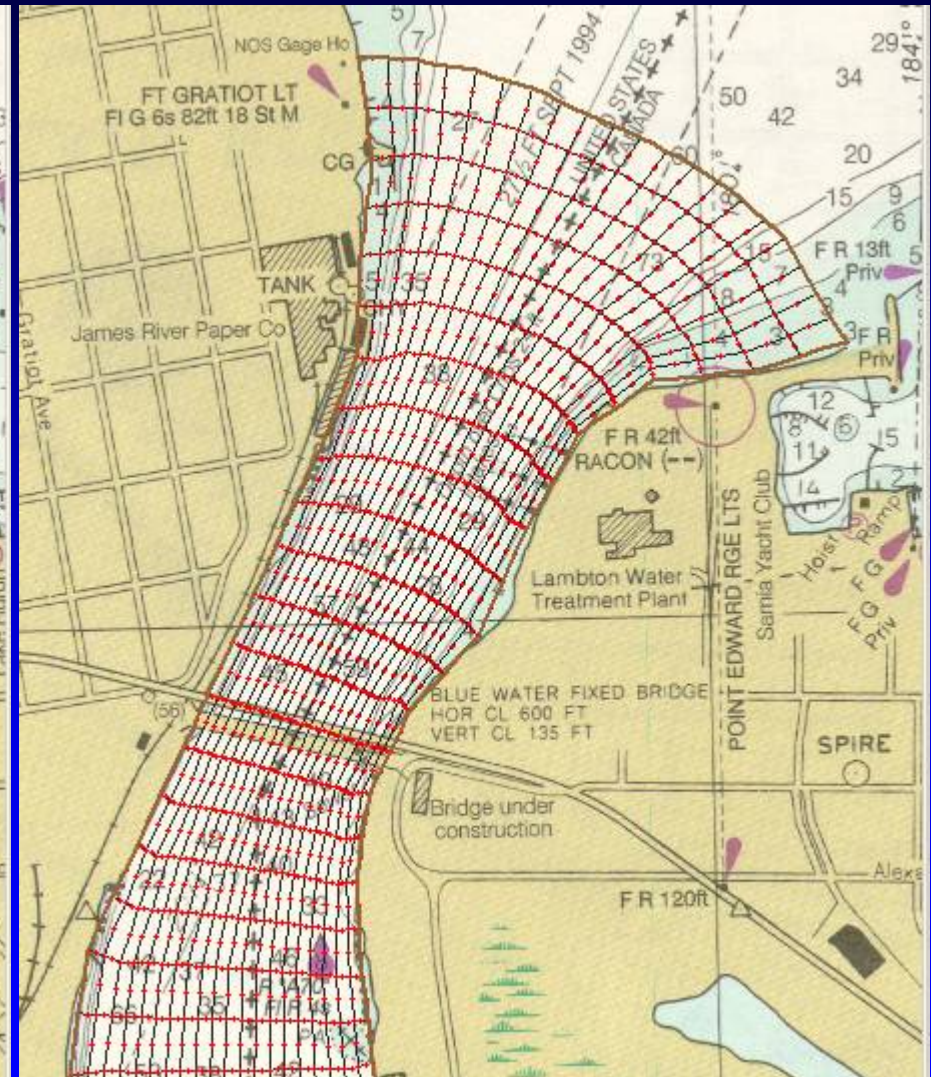
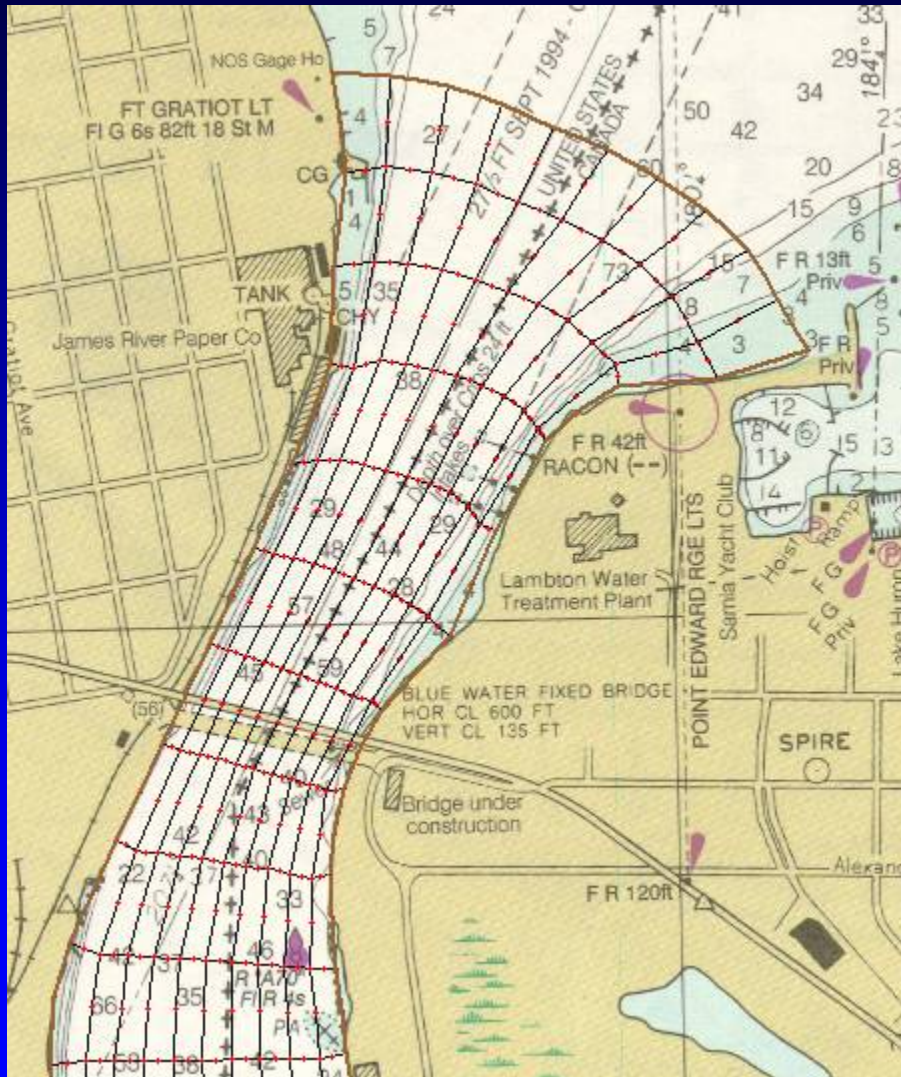
LAKE ST. CLAIR WATER LEVELS - JANUARY 2005



2-D Flow Model – Detroit/St. Clair River

Standard Version

Public Water Intake Version





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Bathymetric and ADCP Surveys

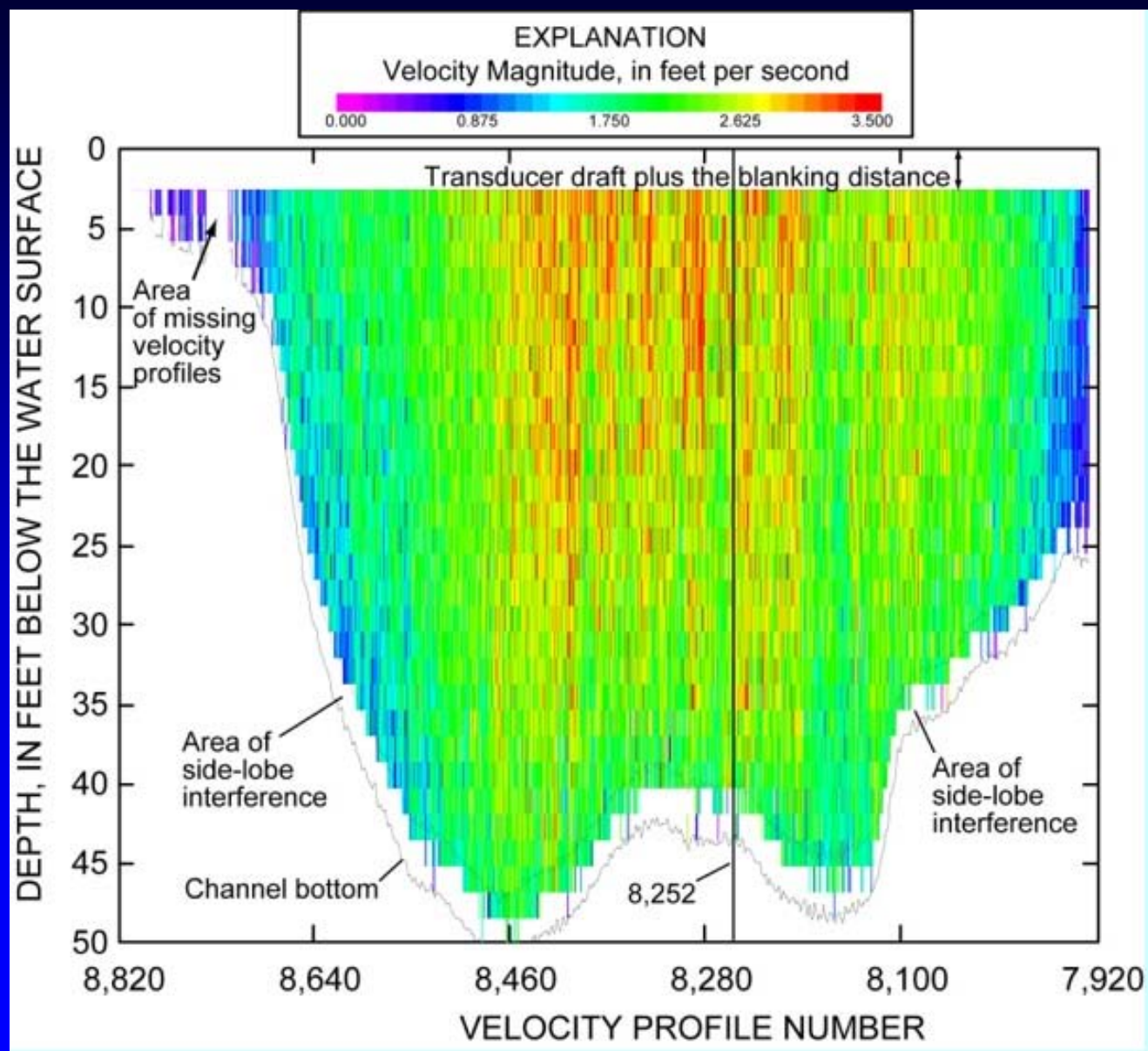
Detroit and St. Clair Rivers





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ADCP Velocities





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For further information:

U.S. Army Corps of Engineers
Great Lakes Hydraulics and Hydrology Office

Dr. James Selegear, P.E.

477 Michigan Ave

Detroit, MI 48226

(313)226-6791

James.P.Selegear@usace.army.mil

7/6 1000 10:37

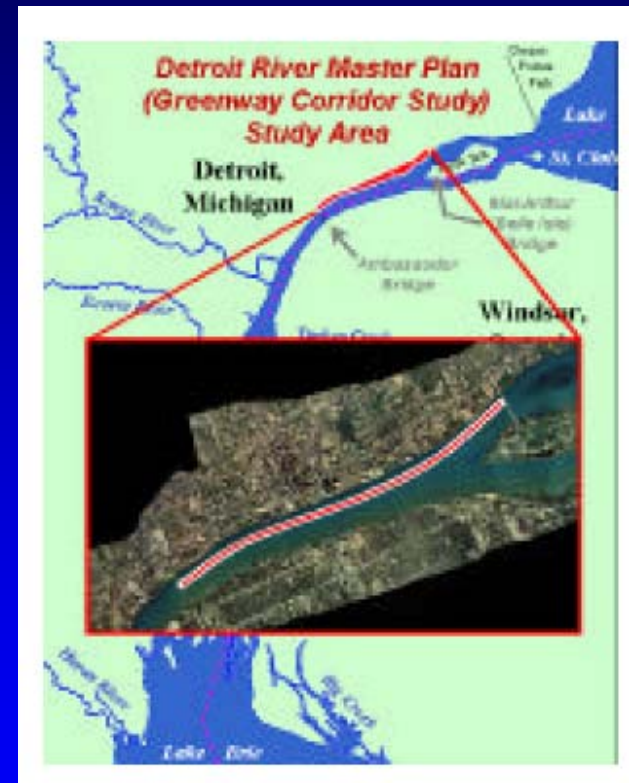


**US Army Corps
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Present Corps Projects

LOCATION MAP & PICTURE:



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Present Corps Projects

LOCATION MAP & PICTURE:





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Present Corps Projects

LOCATION MAP & PICTURE:



LOCATION MAP & PICTURE:





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Present Corps Projects

LOCATION MAP & PICTURE:

**Gibraltar
Erosion Protection
(Section 14)**



LOCATION MAP & PICTURE:

**Belle Isle Park
Erosion Protection
(Northwest Shore)
(Section 14)**





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Present Corps Projects

LOCATION MAP & PICTURE:



LOCATION MAP & PICTURE:





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Present Corps Projects

LOCATION MAP & PICTURE:

Belle Isle South Shore Erosion Protection (Section 14)



LOCATION MAP & PICTURE:

Rouge River Oxbow Project Modification for Improving the Environment (Henry Ford Museum and Greenfield Village) (Sec 1135)

